

REMARKS

This application has been reviewed in light of the Office Action dated October 7, 2004. Claims 1-12, and 15-18 are presented for examination, of which Claims 1, 8, 9, 15, 16, and 18 are in independent form. Claims 13 and 14 have been canceled, without prejudice or disclaimer of subject matter. Claims 1-12 and 15 and have been amended to define more clearly what Applicant regards as his invention. Claims 16-18 have been added to provide Applicant with a more complete scope of protection. Favorable reconsideration is requested. The canceled claims will not be further addressed herein.

Claims 1-12 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,909,291 (*Myers et al.*).

As shown above, Applicant has amended independent Claims 1, 8, 9, and 15 in terms that more clearly define what he regards as his invention. Applicant submits that these amended independent claims and new independent Claims 16 and 18, together with the remaining claims dependent thereon, are patentably distinct from the cited prior art for at least the following reasons.

The aspect of the present invention set forth in Claim 1 is an image processing method of inputting a color image signal and correcting the color image signal according to an observation condition. The method includes inputting the color image signal, judging whether or not the inputted color image signal represents achromatic color, and correcting the inputted color image signal according to the observation condition. The method also includes controlling the correcting step according to a result in the judging step, such that the corrected inputted color image signal remains achromatic color when it

is judged in the judging step that the inputted color image signal represents achromatic color.

Among other notable features of Claim 1 are judging whether or not the inputted color image signal represents achromatic color, correcting the inputted color image signal according to the observation condition, and controlling the correcting step according to a result in the judging step, such that the corrected inputted color image signal remains achromatic color when it is judged in the judging step that the inputted color image signal represents achromatic color.

Applicant notes that gray is the important color in color reproduction and that it is also important in color reproduction that achromatic input color is maintained as achromatic output color. Accordingly, the invention recited in Claim 1 prevents achromatic input color from becoming non-achromatic color during the correction performed by the correction step.

Myers et al. relates to color matching systems, or to systems for translating data representing a color from a source color graphics device to data representing a color in a destination color graphics device. The *Myers et al.* system achieves color matching between various input and output devices by using profiles through a procedure depicted in Figure 2. In this procedure, color correction using TRC (tone reproduction curve), stored in a profile corresponding to an input device, is executed (step 31), the corrected color is converted to XYZ coordinates (step 32), and the color on the XYZ coordinates is converted into color signals for the output device (step 33, Figs. 13-17). At this point, a process for matching the input gray axis and the output gray axis with each other is performed (Fig. 9,

S122). Then the correction using the TRC stored in the profile corresponding to an output device is executed (step 34).

The *Myers et al.* procedure depicted in Figure 2, however fails to disclose the judging, correcting, and controlling step of Claim 1.

Further, the correction of the gray axis in the *Myers et al.* procedure is executed with respect to the whole input image. This is quite different from the features of Claim 1 of judging whether or not the input color image signal represents achromatic color, and controlling the correction to the inputted color image signal according to the judged result.

Furthermore, the Office Action appears to equate Figure 2 and column 5, line 63, to column 6, line 53 of *Myers et al.* With the judgement feature of Claim 1. Applicant disagrees with this understanding of *Myers et al.* Specifically, neither Figure 2, nor any other portion of *Myers et al.*, is seen to discuss any judgement process. The characteristics of the *Myers et al.* procedure is to achieve color matching by using color profiles corresponds to the description in the Related Background Art section of the originally filed specification of the present invention (page 1, line 13, to page 2, line 8).

Applicant submits that nothing has been found in *Myers et al.* that would teach or suggest judging whether or not the inputted color image signal represents achromatic color, correcting the inputted color image signal according to the observation condition, and controlling the correcting step according to a result in the judging step, such that the corrected inputted color image signal remains achromatic color when it is judged in the judging step that the inputted color image signal represents achromatic color, as recited in Claim 1.

For at least the above reasons, Applicant submits that Claim 1 is clearly patentable over *Myers et al.*

Independent Claims 8 and 9 are apparatus and recording medium claims respectively corresponding to method Claim 1, and are believed to be patentable over *Myers et al.* for at least the same reasons as discussed above in connection with Claim 1. Additionally, new independent Claims 16 and 18 include features substantially similar as those discussed above in connection with Claim 1. Accordingly, Claims 16 and 18 are believed to be patentable over *Myers et al.* for reasons substantially similar to those discussed above in connection with Claim 1.

Applicant respectfully traverses the rejection of Claim 15.

The aspect of the present invention set forth in Claim 15 is an image processing method. The method includes inputting a color image signal, performing a non-linear correction on the inputted color image signal according to an observation condition, performing a linear correction on the inputted color image signal according to the observation condition, and, when the inputted color image signal represents achromatic color, converting the inputted color image signal such that an output signal representing achromatic color is output. When the second correction step is executed according to the observation condition, the conversion step is not executed.

Among other notable features of Claim 15 are performing a non-linear correction on the inputted color image signal according to an observation condition, performing a linear correction on the inputted color image signal according to the observation condition, converting the inputted color image signal such that an output signal representing achromatic color is output when the inputted color image signal represents

achromatic color, and when the second correction step is executed according to the observation condition, the conversion step is not executed.

As discussed above, *Myers et al.* does not teach or suggest a correcting the inputted color image signal according to an observation condition. The Office Action cites column 6, lines 19-27, and 38-41, as disclosing non-linear correction, and column 16, lines 33-38 of *Myers et al.* as disclosing linear correction. However, Applicant notes, that these corrections are not performed according to an observation condition. Accordingly, nothing has been found in *Myers et al.* that would teach or suggest performing a non-linear correction according to an observation condition, and performing a linear correction according to the observation condition, as recited in Claim 15.

The Office Action cites column 16, line 14, to column 17, line 60, of *Myers et al.* as disclosing the feature of when the inputted color image signal represents achromatic color, converting the inputted color image signal so that an output signal representing achromatic color is output, but when the second correction step is executed according to the observation condition, the conversion step is not executed. Applicant respectfully disagrees. The cited passage merely discusses the match routine depicted in Figure 14, and that if the source device is a virtual device using a color space, either calibrated or un-calibrated, there may be no TRC correction necessary. However, Applicant has found nothing in *Myers et al.* that would teach or suggest when the inputted color image signal represents achromatic color, converting the inputted color image signal so that an output signal representing achromatic color is output, but when the second correction step is executed according to the observation condition, the conversion step is not executed, as recited in Claim 15.

For at least the above reasons, Applicant submits that Claim 15 is clearly patentable over *Myers et al.*

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration or reconsideration, as the case may be, of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'Fritz Klantschi', is written over a horizontal line.

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